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ORIGINAL ARTICLES.

SEXUAL PURITY.

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In what does purity consist? What is its law? Upon what sanction, human or divine, does the law rest? Is the law equally binding upon men and women?

To these questions the Social Purity League would give one answer. The average practicing physician would give another. The law of the State is based upon ideas differing from both replies. The church gives an answer differing somewhat from all of them. What is the actual will of God and the will of Nature on the subject? We may be certain that the two wills will coincide. If we can find out precisely in any case just what Nature wishes we may be quite sure that we have found out what is the will of God in that case. For Nature is God's way of expressing Himself.

In the case of sex relationships it may as well be confessed that Nature does not seem to know her own mind. This is the origin of the whole moral confusion upon the subject. In other appetites and desires Nature is a trustworthy guide. Their existence is *prima facie* proof of their innocence. They are warnings of needs. They protect themselves against abuse by the sense of satiety. Why not "follow Nature" here as elsewhere? The instant that proposal is baldly made, all men see that it will not work. As a social rule it is condemned by the practically unanimous vote of society. And it is not civilized and Christian society alone which condemns it. Unregulated intercourse at will is not permitted even by the lowest savages. Among the lower animals it is not possible. In men it is physically possible, but is limited and regulated by the social instinct. Those limitations have the force of law, and are maintained by an appeal to religion. What then are they, and ought they to be?

The first prohibition is of *Adultery*. What is adultery? The legal definition is slightly different, but the practical definition is: sexual connection with another man's wife. In what does the wrong of the action consist? The answer is, it is a wrong to the woman's husband. This is the view which the law takes of the matter. This is the view of the Old Testament Scriptures. The adulterer was punished as a thief, and the adulteress as a warning. Beside that it was an offense which struck at the root of a society which was organized about the tribal principle. It "defiled

the blood." That offense has always been so sternly condemned by all men that we need not dwell longer upon it. Any man guilty of it flies in the face of Nature, society, and God, and among the three he will find his punishment.

But what about commerce of the sexes which does not involve the element of trespass and does not defile the blood? What is the absolute and ideal right? Is the law the same for all? Should all be alike punished for its breach? Let us take this last question first. Should the man and the woman be held to the same accountability? The answer is, they cannot be. The cry, "the same law of purity for both sexes," is both silly and mischievous. The champions of this movement do not seem to perceive that in the leveling process attempted the woman is quite as likely to be dragged down as the man is to step up. Nothing is gained by ignoring facts. Society punishes the woman's fault far more cruelly than it does the man's simply because it believes the fault to be far more heinous in her than in him. One element in guaging the gravity of offense against a rule is the consideration of the consequences of the action. In this offense the woman is defiled in the body, in her emotional nature, in her affections, in her soul, to an extent and in a way which is not true of the man. In her case the consequences are conserved, transmitted. In his they come to an end. His offense may have a moral aggravation far beyond hers, or it may not. But the same offense it is not, nor can nor ought society to deal with her as with him. His penalty cannot be of the same kind as the one meted out to her. If he be threatened with that alone by well-meaning reformers, he can well afford to smile in their faces. Nothing is idler than the rhetoric about the injustice of the fact that she is cast out to shame and cold while he is received to club and drawing-room. This has always been society's method, and always will be. The fault has demonstrated her to be unfitted to discharge her social duty, while it has not conclusively shown his unfitness.

From this the law of sexual purity for women, and the reasonableness of that law begins to appear. For them the law is absolute chastity. No excuse or palliation will be admitted in the judgement of human society. God's judgements, we may well believe; will be in many instances different. He can heed the plea, "she sinned much because she loved much." But society cannot. There is too much at stake. In her person society itself is defiled by the offense, and is compelled in self-defense to visit upon her a penalty which does not fall upon her partner. This may be called hard, unjust, unfair, atrocious even, but that does not change the fact. Beside that, a closer examination of all the data would probably show that it is not open to these charges. At any rate, it is the way in which woman herself deals with her offending sister.

It is clear, therefore, that human society, presumably giving voice to the will of God, demands absolute continence (1), of all married men, under the penalty which attaches to a broken oath; (2), of all women, under the penalty which attaches to any act which brings confusion into the social structure; (3), of all married women, under the additional penalty of debauching posterity.

This leaves for consideration those men who have contracted no obligations, whose incontinence does not seem to them to carry with it any evil consequence, whom society does not severely punish, who find across their path only what seems to be an arbitrary prohibition. What will keep them continent? What ought to keep them continent? What has Nature, what has God to say to the young man here? There is no department of morals where it is as difficult to speak honestly. There is no place where conventional morality, both in its teaching and result, or lack of result of its teaching, is so unsatisfactory. When the young man is bidden, "thou shalt not commit adultery," he heeds. In all these cases he sees both the reason for the prohibition and the peril of the offense. But when he is bidden, "thou shalt not commit fornication," he heeds little. He knows that fornication is not adultery. The reasons for its condemnation are not so evident. They lie so deep down in the complex nature of things that he doubts their existence. The torment of an appetite which he knows to be "natural" drives him

across a prohibiting line which he suspects to be "unnatural." The difficulty for him is intensified by the artificial conditions of the society in which he finds himself. In a simple social structure each man and each woman is mated and mated early. Physical appetite is transfigured by affection, and held in check by the responsibility of parentage. But each generation the average age of marriage is being pushed farther onward, and the percentage of unmarried men and women increases.

What shall the moralist, the physician, the priest say to these? It would surely be a great gain if they, all three, can say the same thing. To the unmarried American woman, little needs to be said. She is chaste by habit, by tradition, by pride, by instinct, by physical nature. She needs little exhortation. But what of the man? How many are continent between the ages of twenty and thirty-five? No one can say. Some are; probably far more than is often supposed. But more are not. They say, when they speak at all on the subject, that it is "a counsel of perfection" to which they are not equal. They find no fault with the high demand which conventional morality exacts, but they regard it as impossible of attainment. What considerations will serve to give vigor to the young man's will by which he can bid his turbulent appetite come to heel? Christianity provides the supreme truth. It tells him that his body is the temple of a Holy Spirit. It warns him against defiling the temple of the Holy Ghost. It asks him if he will dare to "make the body of Christ the member of a harlot." There are thousands for whom this is sufficient. Their souls are inwardly reverent, and they compel their reluctant bodies to be at least outwardly respectful.

But there are tens of thousands to whom this is not sufficient. For various reasons, the spiritual dynamic of Christianity does not touch them. Has the law of purity any other hold upon them?

There would seem to be at least two facts which should bid them pause. The one is the peril to the body; the other is the peril to the soul. Let us not be misunderstood. We do not flourish threats of death to the body or of damnation to the soul. But there are a thousand ills which stop far short of either dissolution or damnation, which are nevertheless so grave that none but a fool will take chances with them. Fear may be a low motive, but the appeal to it is not unworthy. Indeed it probably is in point of fact the most common of guides. The man who buys sexual indulgence habitually, takes risks of bodily damage which none but a fool would incur. He imperils his subsequent life; the health of his wife who is to be; the life and self-respect of his unborn children. Does he smile and say, "I'll take the chances?" Would it not be well for the experienced physician to say to him, "I have heard men say that; and I have seen them afterward, when they wished that they had died at least before they were damned."

There is another penalty, however, about which Nature is inexorable. It is none the less natural because it happens to be a law of human nature. Why is pure lust not immoral in a beast? And why is it immoral in a man? Because in the beast it is not correlated with the affections, and in the man it is. "Making a beast of one's self" is not a metaphor. It is a scientific statement of a possibility. It is accomplished by eliminating the humane element from an act and thus reducing it to the deed of an animal. But this can only be done at the expense of the human part of Nature. If it be done repeatedly, the humane element is injured. If it be done habitually, the humane element is destroyed. Nature is leisurely but unerring in her revenges. If one should then be counselled by a physician, who knows only the body, to "seek health by the temperate gratification of an appetite," he should be wise enough to object, "your advice would, no doubt, be wise if it were an appetite which had in it no quality but physical. Your prescription would be well for a beast; for a man it is not well." Incontinence of the body means deterioration of the soul. This would be just as true though the Bible had never been written, and though there were not a preacher of morality in the world. "The house of the strange woman opens unto death and her paths unto the dead." The

soul which goes there sickens, and dies if it abides there. This is the price which Nature fixes. Any cost of self-repression is cheaper. In this Solomon, Robert Burns, St. Paul, and the Great Physician agree.

I have not mentioned the crime of seduction in any of its forms. The man who is capable of taking advantage of youth, ignorance, inexperience, or of woman's love for the gratification of his lust, or the rare, but still existent, wanton woman who plays and preys upon "the imperious instinct of man," are both alike beyond argument. They are condemned already.

"Who cast the devils from the Gaddarene,
Could hardly do so much for them, I ween."

NON-SURGICAL TREATMENT OF SIMPLE GOITRE.

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The non-surgical treatment of simple goitre consists of internal medication with cutaneous application of remedies, deep hypodermic injections, and the application of the galvanic current, either alone or by polar diffusion of medicaments, the latter being technically termed cataphoresis.

Constitutional or internal medication consists in giving iodine in some form, either combined or uncombined, the desiccated extract of the thyroid gland of the sheep, muriate of ammonia, and heart-tonics.

The following formulæ have been used and recommended:—

℞
Liq. iodini comp. . . . . ℥ ss
Write: Give three drops, three times a day.

℞
Iodini . . . . . ℥ ss
Lanolini . . . . . ℥ vj
Ung. zinci oxidi . . . . . ℥ ij
Oleo bergami . . . . . gtt. v
Mix, and apply twice daily.—*Dacosta.*

℞
Ammon. mur. . . . . grs. x
Pot. iodidi . . . . . grs. iij
Dissolve in half a glass of water.
Write: For one dose; to be repeated three times a day.

℞
Ung. iodini comp. . . . . ℥ iv
Write: Apply daily.—*Dr. G. S. Thornton.*

℞
Pulv. hydrarg. oxidi rub. . . . . ℥ i
Cerat. simp.,
Lanolini . . . . . āā ℥ ij
Mix well, and apply thoroughly every night.

No internal medication was used in his cases. Most excellent results were reported (Dr. E. J. Brown).

The tincture of iodine in small doses, long continued, with the external use of phytolacca, has been recommended by Prof. Waugh.

Dr. J. D. Ely uses the tincture of phytolacca, made from the green root, one ounce of root to one ounce of alcohol. Dose not given. He reports most excellent results.

Dr. J. Q. A. Clewes also reports good results from the use of three-drop doses of the tincture of phytolacca (green root not specified), and the ointment of the red oxide of mercury externally.

Dr. W. C. Abbott recommends the internal use of iridin, also of iodine or iodoform, with the iodide of potassium by cataphoresis (on the cathode).

Phosphorus has been recommended by one writer, in doses of one-twelfth of a grain three times a day, carefully watching the effect.

Dr. H. A. Carrington has used desiccated thyroid with success in two cases that had resisted all other treatment.

Dr. Ingals (*N. Y. Med. Rec.*, 1895, XLVII, p. 95) reports fifty cases, gathered from various sources, treated by thyroid extract, and concludes that:—

"Incautious dosage may produce fatal results.

"Internal administration offers as good results as hypodermatic use.

"Cystic glands do not seem to be benefited."

Others report good results from the use of the desiccated thyroid, both internally and by injection.

Dr. Chew, Bengal, India, recommends the use of the iodide of arsenic internally,

and the ointment of the red iodide of mercury externally.

DEEP HYPODERMIC INJECTION.

As above stated, desiccated thyroid is more or less used. Some practitioners recommend a solution of carbolic acid. One formula for such injection is as follows:—

℞

Ergotine	grs. xv
Glycerine,	
Chloroform	āā ℥ ss
Aquæ distil.	q. s. ad. ℥ 1¾

M. Inject half a fluid-drachm into the body of the tumor every six or seven days.

The tincture of iodine has been suggested for injection, but I should hesitate to use it. Alcohol might be used and a few drops inserted into various portions of the gland, being careful not to stimulate too much. On the whole, the injection method, in this disease, is not so safe and certain as more conservative treatment. I have not attempted it as yet, although if carefully done, with proper substances, it may give good results.

The treatment by cataphoresis is absolutely safe and is as certain as any treatment can be. A strong solution of the iodide of potassium is applied to the tumor by means of the negative pole of a galvanic battery. The positive pole may rest on the back of the neck or on the opposite side of the tumor. I use a current as strong as the patient can bear (say from five to ten milliampéres) with a sitting of fifteen minutes every other day, unless the parts get too tender, when a longer interval must be allowed between treatments. In connection with the electrical treatment, I give the tincture of strophanthus in three to five-drop doses three times a day. In this way the tumor quite rapidly subsides and is finally entirely reduced.

Some writers still report using iodine or some one of its salts with the positive pole. This is entirely wrong, being contrary to the chemical laws governing cataphoresis, or, as I may also say, electrolysis as well.

The halogens, or salt producers, such as iodine, bromine, chlorine, fluorine, etc., are all electro-negative bodies, and are repelled by the negative pole of the galvanic battery and attracted by the positive pole. Hence if in the treatment just outlined the current be strong enough, or is continued long enough, free iodine will appear at the positive pole, being liberated from the potassium solution by electrolysis, and traversing the tissues.

To relieve pain we may use on the positive pole such chemicals as morphine, aconitine, atropine, hyoscyamine, and some other like substances, as they are all electro-positive bodies, consequently will be repelled by that pole and made to penetrate the tissues. These facts should be borne in mind if electricity be used in connection with medicaments.

At the meeting of the Society of Therapeutics, of November 13, 1895, the President, M. Ferraud, reported the following case: A man, 35 years old, having an enormous goitre, was seized with congestive symptoms due to increase in the tumor. His physician prescribed for external use an ointment containing iodine and iodide of potassium, and administered internally the potassium iodide in fifteen-grain doses, four times daily. After three weeks of this treatment the goitre had diminished considerably in size, but the patient was attacked with coryza, dyspnœa, diarrhœa, tremor, became cachectic, and at the end of four weeks died with symptoms of cardio-pulmonary paralysis.

In the discussion of the case, some of the members agreed with the medical attendant in attributing the final symptoms to the rapid atrophy of the thyroid body. Others, among whom was M. C. Paul, inclined to believe that the case was one of iodism in a patient of marked susceptibility to the drug. M. Paul remarked, however, that in these cases one should not blame the iodine exclusively, as it was known that each iodide had a different action from all others and from the tincture of iodine. M. Ferraud called attention to the clinical fact that patients with goitre appear especially susceptible to the action of potassium iodide.—*Le Progres Medical.*

Dr. C. Galre has had good results from the parenchymatous injection of one-fourth to one drachm of the following:—

℞ Iodoform	1 part
Sulphuric ether,	
Olive oil	āā 7 parts

Mix and inject.—*Revue de Laryngologie.*

COMMUNICATIONS.

MODIFICATIONS IN REGIMEN DEMANDED BY INSOMNIA.*

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Having now obtained a general idea of sleep and its derangements, it remains to consider, on the one hand, the rules and observances which experience has shown to be serviceable in maintaining the sleep function in a healthy condition, and, on the other, the modifications in the general mode of living demanded by insomnia. The first part of the proposition represents the ordinary, while the second part includes the exceptional hygiene of sleep. Let us consider briefly those simple rules, the observance of which will be found most conducive to natural sleep.

In the first place, as may readily be imagined, the sleeping apartment should be well ventilated, so that there may be no overloading of the lungs with carbonic acid gas and consequent interference with the normal oxygenation of the blood. Few persons, indeed, pause to remember that such overloading of the blood with carbonic acid gas means nothing less than asphyxiation of the higher nervous centres, and consequent depression of the whole physical and mental economy. The arrangement of the bed is likewise a matter of importance. It should be neither too hard nor too soft; for if too hard, it may cause sufficient discomfort to impede the occurrence of unconsciousness; while if too soft, there is sure to be loss of bodily vigor. A moderately soft hair mattress superimposed on a set of good springs makes, on the whole, an excellent bed. Feathers, on the other hand, are not suitable material for the bed, except in the case of very weak, thin-blooded persons, for whom the utmost conservation of bodily heat both night and day is a necessity. Such modern appliances, however, as air and water beds are inapplicable except for special service in hospitals. The question as to the garments most suitable for sleeping has given rise to any amount of discussion. In my opinion, the indications are fairly well met by the use of linen in summer and a light variety of flannel in winter. Silk is, on the whole, unsuitable, as I have convinced myself by a personal trial.

A great deal has been written concerning the proper position in sleeping. The injunction to sleep on the side is well founded physiologically, for nothing is more certain than that lying on the back is conducive of dreaming and even nightmare. Of equal value is the advice to use a low instead of a high pillow. The exceptions to this rule will be considered later.

With regard to the bed coverings, it may be said that the habit of heaping on blankets indiscriminately is one of the worst, since the body is readily thrown into a state of perspiration, entailing at once debility and liability to cold. Enough coverings to maintain a comfortable degree of bodily heat fulfils every requisite. A good hour for retiring for those in adult life is ten or half after ten o'clock.

The preoccupancy of the mind by pleasant thoughts before going to bed is an important matter, and should habitually engage the attention of those who aspire to be good sleepers. It is no easy matter to accomplish this by a mere fiat of the will, for the simple reason that the exercise of this faculty means unusual mental alertness, and this is only another way of saying that the more we "will" the more wakeful we become. In order to escape the dilemma we shall find that an appeal to the law of substitution will not prove in vain. By this I mean simply that sombre thoughts are best banished when we displace them with their psychical opposites. To this end it is well to make

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it a fixed rule to abandon all mental work of an engrossing kind at least an hour before bedtime. The intervening time should be devoted to music, simple games, reading and conversation, or some other form of light amusement.

For a large proportion of the brain workers of the United States eight or nine hours of sleep are not too much. To appreciate this fact it must be borne in mind that brain work is more fatiguing in our climate than in that of Europe. On this point the testimony of foreigners who have come to this country, and of Americans who have lived abroad for a number of years and then returned, are in substantial agreement. Those who aspire to keep the brain wide-awake during the day and fast asleep at night should not indulge to any great extent in alcoholic stimulants. While sporadic and exceptional mental work may be aided by the moderate use of alcohol, the contrary is true of sustained mental effort, especially that of a high, creative order.

Again, by disturbing the usual flow of the blood, and—when long and habitually indulged in—causing permanent expansion of the smaller blood vessels of the brain, alcohol is frequently enough the eventual cause of severe insomnia. It does this, as may be gleaned from what has previously been said, by keeping the brain in a state of permanent congestion—a condition directly opposed to the occurrence of natural sleep. The position of alcohol, then, is essentially that of a remedy to be alone invoked to meet exceptional conditions of the system. To those who are debarred by the nature of their occupations from procuring the necessary amount of sleep at night, the habit of taking a short nap during the day is of great assistance. It must not be forgotten, however, that day sleep never is as refreshing as that obtained at night. Hence it is that night clerks, watchmen and others are usually compelled to give up their occupations after a few years, and instead adopt employments which enable them to sleep a reasonable time after sundown.

As a matter of course, the bodily functions should be carefully attended to; and this applies with especial force to digestion, which should never be overtaxed. Nothing, indeed, is more certain than that overcrowding the stomach before retiring is capable of producing an unhealthy type of sleep, in which dreams, nightmare, and unconscious cerebration strive for the mastery. These, then, are the rules which experience has shown to be most useful in maintaining healthy sleep. I may add, also, that they are to be observed as much as possible by those who are afflicted with sleeplessness. When the last-named condition is present with any degree of severity, they are of themselves hardly sufficient to bring about that change in the system that is necessary to rehabilitate the sleep function.

Under these circumstances a few supplementary observations concerning the special hygiene of insomnia will serve, I trust, to complete the argument. First and foremost, the diet of those who suffer from insomnia should be modified with special reference to the condition of deranged rhythm which pervades the central nervous system. To this end, foods which are digestible and, what is quite as important, soporific in their effects should be added to the dietary.

In the first rank among such foods stand the various malt-hop preparations, in which the soporific principle of hops is present in much larger quantities than in any popular beverage containing malt. A number of such preparations, under various designations, have been placed upon the market during the last few years. Some of these are of excellent quality, while others are comparatively worthless.

Should these malt-hop combinations be distasteful, it is an easy matter to prepare a simple infusion directly from the hop leaves. Of this "hop tea," doses of from three to four ounces may be taken before retiring. While hops possess but feeble narcotic properties, they are decidedly sedative in the action, so that they predispose to sleep without producing stupefaction.

Lettuce, when taken during the latter part of the day, exerts a decidedly sedative action in many persons. Its use is, therefore, commendable in the milder degrees of insomnia. When served with ordinary vinegar it is usually well borne; but the addition of rich dressing should be emphatically condemned. A

remarkable circumstance is the frequent failure of lactucarium—the potent principle of lettuce—to produce noteworthy effect, whereas the use of the fresh leaves under precisely similar circumstances may be followed by distinct drowsiness.

Some of the things to be avoided in connection with the dietary of insomnia are the use of tea or coffee during the latter part of the day, and the same may be said with regard to indulgence in tobacco in the morning. Proper exercise of the muscular system is likewise of great importance in the management of many cases of insomnia occurring among brain-workers.

By this I do not mean that a high grade of athleticism is either feasible or desirable among brain-workers. What I maintain, however, is this: that to place the brain in the most perfect condition for repose it is necessary that there should be not only exhaustion of the centers concerned in mentalization, but also of those which control the muscular system. This symmetrical exhaustion of the motor and psychical mechanisms, so far as the promotion of sleep is concerned, is best attained by supplementing the intellectual labor of the day with some form of muscular exertion culminating in sensations of pronounced bodily fatigue. I am content with the statement of the general principle, and leave it to each one to decide for himself what precise form this exercise shall take.

It is self-evident that a sponge bath with tepid water and energetic frictions with a coarse towel or hair mittens are the proper thing after exercise. Let me also recall the fact that a change from a relatively high to a low altitude is often highly efficacious in promoting sleep.

In conclusion, I may add that in anæmic persons sleeplessness is frequently entirely relieved by raising the foot of the bed three or four inches, by which manipulation the vascular pressure in the central nervous system is slightly raised.

As a matter of course, there are cases of sleeplessness which fail to yield to hygienic measures alone; with these the medical expert is alone capable of dealing.

SARCOMA OF THE KIDNEY IN CHILDREN.

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I have chosen this theme for the sole reason that a number of cases falling under my observation within the last few years have forced me to become somewhat familiar with the manifestations of kidney sarcoma in the young.

History.—I shall limit myself to the kidney sarcomas of the child, because of their frequency as compared with other solid tumors of the kidney, such as carcinoma, fibroma, lipoma, etc. Starr states that new growths of the kidney in children are for the most part, if not entirely, malignant. Benign growths may occur, but statistics do not record any that have been the subject of surgical interference.

Sarcoma may affect the kidney either primarily or secondarily, but it is only to the primary growths that I shall ask your attention at present. Primary sarcoma, as a rule, involves one kidney only. Paul, of Liverpool, states that nearly half the cases are bilateral, but his experience does not accord with that of the majority of surgical writers upon the subject. Morris, of London, states that myosarcomas are the only bilateral ones, and that, in the rare instances in which both kidneys are involved, the one is secondary to the other.

As a rule these tumors grow rapidly, often to an immense size, and destroy life by their local progress, which is usually along the course of the renal vessels. These renal tumors of children are usually of soft consistence, luxuriant growth and vascular on the surface. They weigh anywhere from a few ounces to many pounds, seven or eight pounds being a

common size. In my experience they have always been unilateral. Either kidney may be affected. They may originate either in the fibrous stroma of the cortex or in the submucous cellular tissue, and in their ongrowth they usually preserve the smooth outlines of the kidney, although often only a limited portion of that organ is involved in actual sarcomatous degeneration. They are, therefore, primarily extra-renal, although usually encapsulated, and as they grow they distend or surround the kidney rather than infiltrate it. This is the reason, probably, that examination of the urine so seldom reveals any evidence of the presence of a tumor; although Hennoch, of Berlin, in speaking of the absence of urinary symptoms, thinks it may be due to pressure or displacement of the ureter and a gradual destruction of the kidney, rendering it incompetent to carry on its functions.

The growths may be either of the large or small round-cell variety of sarcoma, the spindle-cell variety being exceedingly rare. Biggs, Starr, Paul, and Hennoch state that we often meet with myxosarcomas, myosarcomas, and occasionally cystosarcomas, although the medullary form is probably the most frequent. The myosarcomas are probably of congenital origin, as they consist of a mixture of striped muscular fibre and sarcomatous tissue.

Etiology.—In regard to the origin of these tumors, little is known. Some of them are undoubtedly congenital, as, for example, the myo-and rhabdo-sarcomas, which contain transverse striped muscular fibres. Renal calculus is mentioned as an occasional cause; traumatism, irritation of a pyelitis, or retention of urine, are frequently exciting causes. More frequently we are unable to discover any assignable cause. The tumors are met with more frequently during the first ten years of life; indeed, the majority of them are found during the first five years. In a table of 54 cases mentioned by Starr, 9 were under one year old, 17 between the ages of one and three, 18 between three and five, making 44 of the 54 under the age of five years. Sex seems to play an unimportant part in the development of these tumors; in 40 cases recorded, 22 were females and 18 males. Of 30 cases, the right kidney was the seat of the new growth in 14, the left in 12.

Symptoms.—In reaching a correct diagnosis, we depend in the first place upon the presence of a tumor of rapid growth, springing from the loin and displacing the abdominal contents forward and to the median line. Pain is an inconstant symptom, and when present is usually due to secondary causes, as intestinal obstruction, pressure upon adjacent viscera, compression of ureter, etc.; when present as a primary symptom, it indicates a hard tumor; it is uniformly absent in the soft, rapidly growing ones. Progressive emaciation is uniformly present, at first not very marked, but as the tumor increases in size it becomes one of the most prominent symptoms. Indeed, Hennoch directs attention to the presence of an abdominal tumor and progress of emaciation as being the two most reliable symptoms of sarcoma of the kidney in children. The complexion is usually sallow, sometimes cachectic, and the little patients complain of great weakness, being unable to take any exercise or to indulge in former games or amusements. Occasionally hæmaturia is present. Irritability of the bladder is also an occasional symptom. As soon as the tumor has attained any considerable size, pressure symptoms with displacement of the viscera attract our attention. Then we may have nausea, vomiting, constipation, œdema, dyspnœa, etc. I regard the presence of a smooth, solid, ovoidal, indistinctly fluctuant tumor in one side of the abdomen traceable to the loin, producing bulging in the flank and displacing the colon forward and to the median line, as being positive evidence of a sarcomatous growth, especially when the history only extends over a few weeks. In a few cases I have observed enlarged veins on the surface of the abdomen overlying the tumor.

Differential Diagnosis.—Sarcoma of the kidney, of course, must be differentiated from tumors of the liver, spleen, pancreas, ovaries, and from an enlarged gall-bladder; occasionally from appendicitis. A splenic tumor can be distinguished from a renal tumor by the absence of the colon in front of it and by its hard, irregular border.

Prognosis.—The disease is usually fatal in from six weeks to six months, al-

though occasionally the patients survive a year or more. The softer the tumor, the more rapidly fatal.

Treatment.—Treatment is either palliative or operative. The palliative treatment, of course, is only applicable to the inoperable cases in the middle or later stages of the disease, when, from the debilitated condition of the child, the enormous size of the tumor, the vitiated state of the blood, or the development of secondary growths elsewhere (metastatic tumors), any operative interference would be contra-indicated. Hemorrhage will call for the employment of hæmostatic remedies, such as gallic acid and ergot; Morris speaks highly of ferric alum for this purpose. Pain, of course, will be controlled by the administration of opium. Early nephrectomy affords the only hope of a cure, and then only in the early stages of the disease.

Czerny in 1881 reported four cases of removal of the kidney for tumors in infants: one by Mr. Jessup, of Leeds, by means of the lumbar incision, in a boy two and one-half years old; one by Kocher, of Bern, in a subject about two and one-half years old; one by Hueter, in a girl four years old; and one by himself, in a girl of eleven months. Three of the patients died within a few days as a result of the operation, one surviving eight months and dying from a recurrence of the disease. In 1885 Mr. Godlee reported a case before the London Clinical Society in which he removed a sarcoma of the right kidney, weighing about a pound, from a 22-months-old child. About the same time Mr. Heath attempted the removal of a tumor of about the same size from a little girl, but was obliged to desist on account of the extensive adhesions, the child dying soon afterward. Hicquet reported a case of removal of a renal tumor from a six-year-old girl by a median incision; she made a good recovery and was well five months afterward. Botevi removed an eight-pound tumor from a child, losing his patient from septic peritonitis on the third day. Bergmann reports 16 nephrectomies, with 9 deaths; one of the patients was living fourteen months after the operation, the others died or were lost track of. Gross collected 16 cases between sixteen months and seven years of age; of these, 9 died and 7 recovered from the operation, all dying within a few months from recurrence of the disease. Gross considered nephrectomy to be positively contra-indicated in the sarcoma of children. Werner tabulated 31 operations, 16 dying from the operation and recurrence taking place in the majority of the others. Butlin states that "not one successful case of nephrectomy for sarcoma in children can be claimed, and it is probable the operation will fall into disrepute."

Sarcomas of the kidney in children are described by Werner, in a child six months old, with a history of injury, the growth being spindle-celled sarcoma; by McCasey, in a child three and a half years old, the tumor of the left kidney weighing four pounds; by King, a congenital tumor of both kidneys; by Burt, in a child eighteen months old, the tumor weighing forty-four ounces. Wheaton removed a sarcoma of the right kidney from a child five and a-half years of age; the child did not survive the operation long. Schmidt mentions the removal of a renal sarcoma from a child six months old, followed by recovery within three weeks. J. Israel, before the Berlin Medical Society, in discussing the early diagnosis of malignant tumors of the kidney, reported the removal of the left kidney from a girl six years of age who was attacked by hæmaturia as a primary symptom; on making an exploratory nephrotomy he found a kidney not much enlarged, but showing evidences of being sarcomatous; recovery ensued. Alsberg reported a case of nephrectomy for sarcomatous tumor of the kidney in a five-year-old child, diagnosed by the presence of hæmaturia and a lumbar tumor; the child recovered from the operation, but died two or three months subsequently from recurrence. Robert Abbé reports in the Annals of Surgery for January, 1894, two very interesting cases of sarcoma of the kidney in children; one a sarcoma weighing two and one-fourth pounds, in a child two years old, in which nephrectomy was followed by recovery, and perfect health eighteen months afterward; the other weighing seven and one-half pounds, in a child aged fourteen months and weighing fifteen pounds, the same operation resulting in perfect health one year later.

Barth, of Marburg, collected statistics of one hundred nephrectomies for malignant disease, of which forty-two died from the operation, twenty died from metastasis, and thirty-eight were cured. Of these so-called cured cases we do not know the after-history, nor how many of them recovered; neither have we the ages of the patients. Sigrist collected sixty-four cases of nephrectomy for sarcoma with thirty-two deaths from the operation; nine went a year and a-half and had recurrence; five went beyond two years, and one continued well for four years. McBurney reports an exceedingly interesting case of sarcoma of the kidney in a boy ten years of age, operated on at the Roosevelt Hospital, New York, April 10, 1894, with recovery but a prognosis of probably early recurrence. Dohrn, of Königsberg, reports a case of nephrectomy of the right kidney in a girl three years old; macroscopic and microscopic examination of the tumor showed it to be a small-cell sarcoma; patient remained well two months after the operation. Dohrn thinks such tumors will have to be classed, in accordance with Cohnheim's views, as teratoma, and their origin may be sought for in fœtal life. Fischer tabulates twenty-five cases of extirpation of the kidney in children for sarcoma, with a mortality of 48 per cent.

Recent literature contains twenty-nine cases, with a mortality due to the operation of 45 per cent. I have operated in two cases: One was a male child sixteen months old, from whom I removed a tumor of the left kidney weighing seven pounds, November 25, 1893; the child is still living and well, so far as I have been able to learn. In the second case, a girl three years and eight months of age, I removed a tumor weighing two pounds, which involved the right kidney; the child is entirely well at the end of three weeks and a-half.

You will see, therefore, that a primary mortality of 45 or 50 per cent. from the operations on sarcomatous kidney in children implies profound shock, this in turn being probably due largely to hemorrhage. To avoid this, we use the Trendelenburg position and elevation of the tumor. To combat shock, Abbé advises a hot coffee-and-brandy enema; at the end of operation a large warm saline enema and strychnia hypodermics. In cases where a pedicle is not easily made, clamps should be applied and no ligature, leaving the clamps on for at least forty-eight hours. My uniform practice has been to apply clamps to the pedicle, cut off the tumor, and then more leisurely clean the pedicle and apply a ligature of heavy braided silk, transfixing the pedicle and tying in two sections. The ureter should be tied separately.

Butlin and Thornton take a gloomy view of operations for sarcoma of the kidney in children. and believe they are likely to fall into disrepute; while Koenig is more hopeful and believes surgery should make such advances as it can. Abbé agrees with Koenig and believes the records can be greatly improved. My own experience leads me to agree with Koenig and Abbè and to advise nephrectomy in all cases of sarcoma of the kidney, whenever the diagnosis is made, without reference to the age of the patient—provided, however, there are no operative contra-indications, such as disease of other organs, marked impairment of general health, or some other equally good reason.

Technique of the Operation.—In regard to the technique of the operation, the patient should be prepared in the usual way as for a laparotomy. My preference has been for the transperitoneal vertical incision over the most prominent part of the tumor. Tait says "the kidney is best reached by the most likely-looking road," while Abbé advises to always cross-cut, his preference being for the transverse incision very near the spine, parallel to and an inch below the last rib, and continued as far as need be toward the median line, crossing the rectus abdominis if the tumor be large. Through such incision any renal tumor can be handled and ample room obtained. The peritoneum will not be opened unless the tumor be large, and then it is better so.

Four cases of sarcoma of the kidney in children have fallen under my personal observation, in two of which operation was declined.

Case I. Annie C——, aged four years, was seen by me first in September, 1880, at which time she was suffering from a large tumor filling up the whole right

side of the abdomen. The tumor was smooth, uniform in outline, and produced marked dyspnœa from its size. The little patient was rapidly emaciated, was extremely sallow and cachetic in appearance, and had suffered severely from hæmaturia. The late Dr. W. H. Byford saw her in consultation with me, and made a diagnosis of medullary sarcoma of the kidney, but advised against operation on account of the advanced stage of the growth. She had been ill some two or three months when she came under my care. She died about three weeks subsequently from exhaustion. No post-mortem was permitted.

Case II. Mary L. C——, aged thirteen months, was brought to my office in June, 1889, with a large abdominal tumor, perfectly dull on percussion, and extending down to the right loin. The child had been ill only two or three weeks, with symptoms of indigestion and rapid loss of weight, when the mother noticed the prominence of the abdomen. After careful examination I made a diagnosis of sarcoma of the left kidney, and suggested an operation for its removal. Dr. Christian Fenger saw the case in consultation with me a week or ten days subsequently, when the child was very much weaker, more exhausted, and presented a decidedly cachectic appearance. He coincided with the diagnosis of retro-peritoneal sarcoma, but advised against operative interference on account of the child's weak condition. The child died a few days subsequently; no autopsy was permitted.

Case III. Martin F——, sixteen months old, of Bohemian parents, was brought to my surgical clinic in the College of Physicians and Surgeons in November, 1893. He offered nothing in his family history which showed a predisposition to any disease; on the contrary, he gave a history of good health and long-lived families in all the branches of his genealogical tree. His father, mother, grandparents, and two sisters aged four and thirteen respectively, were living and well. The patient himself had had a natural birth, and enjoyed the best of health up to the onset of the present illness, when there were noticed pressure symptoms and a very rapidly growing abdominal tumor. He fell out of bed and was tipped out of a baby-carriage about four months previously, without sustaining any apparent injury at the time. About ten weeks before I saw him the mother noticed in the left hypochondriac region a swelling the size of a small orange, which grew rapidly and regularly up to the middle of November, when I first saw him. With the assistance of Dr. T. A. Davis I did a left lateral laparonephrectomy, November 25th. At the time of the operation the child appeared to be well developed, rather large for his age, quite fleshy, and with every appearance of health excepting an enormously distended abdomen which seemed to be particularly bulging toward the left. Palpation showed firmness over this region, and we could readily outline the large smooth surface of a tumor, irregularly ovidal in shape, filling the entire left side of the abdominal cavity and extending quite across to the median line. It was uniformly dull on percussion, freely movable, evidently encapsulated, and apparently not very firmly adherent. It had displaced the abdominal viscera, the colon resonance being advanced to the right of the median line. Pulse and respiration were somewhat accelerated, but this was probably due, to some extent at least, to the influence of fear. Examination of the urine showed nothing abnormal. A diagnosis of sarcoma of the left kidney was made, and a nephrectomy advised and carried into execution. Chloroform was the anæsthetic used, and the usual preparatory laparotomy toilet was made, the abdomen being scrubbed with soap and water, then with ether, finally with alcohol, then douched with a weak solution of bichloride of mercury. The patient was placed in the dorsal decubitus with the head low, hips well elevated, the body inclined toward the right side, which position was maintained throughout the operation, as by elevation of the tumor we hoped to somewhat lessen the amount of blood contained therein. I then made a curvilinear lateral abdominal incision from the last rib, over the apex of the tumor to near the symphysis pubis, with the convexity to the left. Abdominal wall was very much attenuated from stretching and pressure atrophy, so that

the whole length of incision brought us down at once upon the tumor without any extensive opening into the peritoneal cavity. This was due to the adhesion of reflected peritoneal surfaces which were displaced by the ongrowth of the tumor, or else to the stripping of the parietal peritoneum from the same cause. The tumor presented a smooth, regular surface over which ramified several large veins. There were a few adhesions of the para-renal areolar tissue, which were cut between Billroth forceps and the vessels ligated. The descending colon was displaced to the median abdominal region, where the para-areolar attachments were quite firmly adherent to the tumor; these latter were divided and ligated in the same way, when the tumor shelled out quite readily, and while it was being held up the pedicle was secured with long heavy forceps, and the tumor removed by cutting the pedicle—which was subsequently ligated at two points by transfixing with a needle armed with heavy silk, and the pedicle trimmed short.

There was an exceedingly small amount of blood lost—probably not an ounce—and the patient suffered but little shock from the operation, which lasted about thirty minutes. The wound was flushed with sterilized water, and closed with interrupted silkworm-gut sutures. In the upper and lower angles of the wound I brought out a three-inch strip of sterilized iodoform gauze which rested against the pedicle stump, and closed the peritoneal surface. Over this a regular antiseptic dressing was applied, the wound dusted with boracic acid, covered with three thicknesses of iodoform gauze, over this ten layers of bichloride gauze and a roll of salicylated cotton, the whole being firmly secured by a roller bandage carried around the body.

The subsequent history of the case is that of uneventful convalescence. The dressing was changed about the fourth day, at which time the packing was removed. Two days later the stitches were removed and the child sent home recovered. Three months ago, since which time I have not heard directly from the case, the child was in good health and there were no signs of any recurrence of the disease.

The tumor weighed seven pounds, or one-third the weight of the child at the time of operation. It is somewhat irregular in its outline, but preserves a uniformly globular form. The sulcus in the upper part corresponds to the encroachment of the upper third of the kidney and the exit of the blood-vessels and ureter which have been displaced by the large growth. From appearances it would seem that the tumor originated in the lower third of the kidney, elevating the blood-vessels and ureter as it grew, and by compression and invasion of the remaining portion of the kidney gradually transforming the latter into fatty and tumor tissue respectively.

On section the tumor presents a rather uniform appearance and consistency. The upper part corresponds to the small portion of the kidney cortex; is softer from fatty degeneration following the extinction of its function from compression of the blood-vessels and ureter. The remaining extensive portion is firm and rather dense in consistency. It presents a few rings of connective tissue which encapsulated the different portions of the growth at different times during its development. They are made up, quite likely, of kidney capsule and para-areolar tissue.

Microscopic examinations shows the tumor to be composed of small round cells, some of which are pigmented, giving it the character of melanosarcoma. Therefore, microscopically and pathologically we may classify it as a melano-lipo-sarcoma of the kidney.

Case IV.—Virginia D—, aged three years and eight months, was brought to my clinic at the College, January 25, with the following history: She had been perfectly well up to nine days prior to this time, when, during play, she suddenly complained of pain in the right side of the abdomen, followed by nausea, vomiting, and obstinate constipation. She was more or less restless and feverish. A physician was called in, who, finding the clinical symptoms of sudden occurrence of pain in the right iliac region, nausea, vomiting, constipation, distention of the abdomen, and on examination finding a tumor in the right side of the abdomen, diagnosed appendicitis, advised operation, and sent the child to the Women's and Children's Hospital, where she remained under

observation for two or three days without definite diagnosis having been arrived at; she was then brought to my clinic for further examination and possible operation. There was no history of any injury or previous ill health, although, on close questioning, her mother thought there might have been slight enlargement of the abdomen for about six weeks before she complained of the sudden pain and urgent symptoms. When I first examined her she presented the appearance of a fairly healthy child, slightly cachetic. In the right side of the abdomen was a smooth, ovoidal, distinctly fluctuant tumor, extending downwards and backwards in the loin, where it seemed to originate. The ascending colon was displaced forward to the median line; a few enlarged veins were noticed on the surface of the abdomen overlying the tumor. The tumor was dull on percussion, quite freely movable, apparently encapsulated, and on palpation gave evidence of fluctuation. Examination of the urine was negative.

A diagnosis of sarcoma of the right kidney was made and a nephrectomy advised. Chloroform was administered, and Langenbeck's vertical transperitoneal incision made over the most prominent point of the tumor, about an inch and a half from the outer border of the right rectus, the patient's body being well elevated and inclined toward the left side. The abdominal wall was thinned from pressure atrophy, and we immediately came down upon a tumor, which presented a smooth regular surface, to which the ascending colon was intimately adherent; also several points of omental attachment. With the finger the tumor was readily enucleated. When very near its anterior and lower border, what seemed to be a dense fibrous cord prevented its being lifted from its bed. Upon clamping and dividing between forceps, this firm band was found to be the ureter. Several smaller bands of adhesion between intestine and surface of tumor were ligated and divided, and the tumor was readily brought through the incision, pedicle clamped with forceps and tumor cut away. The divided ureter was cauterized with 95 per cent. carbolic acid ligated with fine silk, and dropped into the abdominal cavity. The pedicle of the tumor, containing the renal vessels, after being freed from the adipose tissue, was secured by a double silk ligature, cut short and dropped into the abdominal cavity. The cavity occupied by the tumor was packed with strips of iodoform gauze, the ends of which were brought out at the upper angle of the wound. There was scarcely any hemorrhage, the patient suffered but little shock, and the operation lasted twenty-five minutes. The wound was flushed with sterilized water and closed with interrupted silk sutures. Over this the usual antiseptic dressing was applied.

Patient reacted well; the tension upon the stitches was so great that two or three of them partially cut out and some infection took place along the stitch wound, but notwithstanding this slight infection she made an uninterrupted recovery. Her bowels moved regularly, she urinated without the necessity of a catheter, and her appetite was good.

Microscopical examination of the tumor was made, showing it to be a small spindle-cell sarcoma. The tumor, which presents an irregularly ovoidal form, seems to have originated from the upper and posterior portion of the kidney, just within the capsule, and as it extended downward and backward pushed the kidney forward toward the median line, and as it encroached still further by pressure compressed the ureter, destroying the functional activity of the kidney so that the remaining portion of that organ was rapidly transformed into fatty and sarcomatous tissue of rapid growth which gave the apparent fluctuation under palpation.

I am indebted to Dr. M. L. Goodkind for notes of the following case which occurred in the practice of Dr. Frank Cary:

A child, male, two and one-half years of age, American parentage. Absolutely no syphilitic or tubercular history; no history of new growths in the family. In May 1892, there began to develop tumefaction of the right side, which increased to such an alarming extent that the parents, who had been having faith cures and Christian scientists decided finally to call in a regular physician. Dr. Cary was called. He at that time found enlargement in the right

lumbar region extending toward the anterior abdominal wall; this enlargement did not seem to be painful on palpation, but was slightly indurated and extremely hard. He examined the urine carefully, and found no abnormal constituent. The child was well developed, well nourished, but began to emaciate rapidly. There was no gastric, intestinal, or urinary disturbance. The tumor began to increase in size, and grew until the abdomen became enormously distended, veins enlarged, and about the umbilicus an inflammatory area developed. This condition continued until March, 1893, when the child, growing rapidly weaker and weaker, died.

Post-mortem examination revealed medullary sarcoma of the right kidney the size of a child's head. Very little of the kidney substance was to be recognized. The growth was adherent to the liver and to the mesenteric attachment of the intestine. The mesenteric glands and the retroperitoneal glands were intensely infiltrated. The heart muscle contained a sarcomatous deposit. The calvarium was not opened, on account of the objection of the parents.

Medication in this case consisted of syrup of iodide of iron, etc.

Conclusions.

From the literature of this subject I think we may fairly deduce the following conclusions:

1. These new growths of the child's kidneys are often congenital.

2. They are usually unilateral; when bilateral it is from secondary infection of the other kidney.

3. They are primarily extra-renal, and surround rather than infiltrate the renal tissue.

4. Round-celled is the most common form of these sarcomas.

5. They are of exceedingly rapid growth, and destroy life by exhaustion.

6. They are uniformly fatal when treated medically, the duration of life being from four to twelve months from the time the disease is first observed.

7. Nephrectomy offers the only hope of cure or prolonging life in these unfortunate cases.

8. More accurate early diagnosis and prompt operative interference has lowered and will continue to lower both the primary and secondary mortality.

9. The extra-peritoneal route is preferable when the tumor is small.

10. When large, a trans-peritoneal incision is imperative.

11. It may be either transverse or vertical; considering the nerve supply of the parts, the transverse would seem better.

12. The operation of nephrectomy in these cases is justifiable, and we are not doing our duty as surgeons to our little patients if we withhold the only chance they have for life.—*Medicine.*

Typical Habitual Drunkards.

Our statement last week that the London police court inebriate "repeater," Jane Cakebread, was but a type of the many similar cases, has met with speedy proof. The Swansea journals have since recorded the 279th conviction of Ellen Sweeney at Swansea, in spite of local efforts to reclaim her. Had she received the same lighter sentences as Cakebread has experienced in London, Sweeney would have attained to over a 300th conviction. But the Swansea magistrates, after having found prison and workhouse fail, hit upon a new course this year. After one release in a drunken bout she fell foul of her sister, and had to find a surety that she would keep the peace and be of good behavior for six months. She of course was unable to keep from drink, so that the Bench were overpowered to imprison her for the six months. On her release she offended again, and on a magisterial alternative of being bound over or going to the workhouse she chose the latter, where she has been for several months.—*British Med. Journal.*

One of the Rothschilds is quoted as saying that there will be more chances to make money in America during the next five years than in any other section of the globe.—*Western Druggist.*

A bit of steel deeply imbedded in the eyeball of a man was recently removed at a New York hospital by the aid of a powerful magnet. The magnet, held close to the eyeball, drew out the steel, leaving the eye without serious injury.

EMPIRICISM.*

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Empiricism, that is to say, Quackery. The word is derived from the Greek "emperikos," a searcher after facts in nature, or experimentalist; but it long since degenerated from such a meaning. This was perhaps due to the fact that the empiric threw aside the reasoning faculties in his work because he did not need them, and therefore the profession of empiricism became synonymous with vulgar ignorance. Quackery exists in everything. There are pettifogging lawyers who are quacks, ranting preachers who are quacks, camp-followers and stragglers in war time who are quack soldiers, and there are quack doctors, whom, like the poor, we have always with us.

The most expressive definition of the quack doctor is: "A man who pours drugs of which he knows little into a body of which he knows less"; and, while this was applied by its brilliant originator to the entire medical fraternity, it so plainly refers to quacks that it is worthy of mention.

The history of empiricism is an interesting study in human nature extending over ages and serving as an indicator to point and a monument to perpetuate the memory of the follies and weakness of man at every age and stage of his existence. It is as old as is medicine itself, having been the only kind of medical science which the Egyptians possessed, and the Jews, deriving their knowledge from the Egyptians, pursued the same plan; hence the marvellous entered largely into every cure, and the sacred writings furnish numerous proofs of this weakness of the human mind. It was the Greeks who first cultivated physic as a branch of philosophy and reduced the mass of accumulated facts to a system. From the specifics of the temple and the rubbish of popular credulity Hippocrates gave medicine the garb of a science and so enriched it with experience and observation that his writings are still worthy of consideration, but he could not overcome the fondness for empiricism; while men of science and honor and seekers after truth followed his dictates and improved his plans, popular credulity preferred the charm, the amulet or the wonder-working nostrum.

At the time of Galen and Celsus empiricism was a regular system, having been reduced by Serapion. He saw the field of medicine occupied by his brother physicians, who acted upon and strove to improve the doctrines of the day. Being desirous of taking a short cut to fame and wealth, he proposed to treat all diseases by a simpler method. He proclaimed it foolish and unnecessary to study pathology or etiology, the nature and cause of disease, and declared it was only necessary to be acquainted with the action of drugs in order to be a physician. These opinions of his were held by numerous followers who taught that, by accumulating a mass of fixed facts, invariable rules of procedure could be established in certain cases. There have been empirics ever since, but of late years they confine themselves to advertisements and do not presume to argue or expound their views in the presence of scientists. Like the stragglers of an army, they are quiet and humble in the presence of a soldier, but woe to the wounded or weak who come in their way.

Empiricism gained additional strength at a subsequent period by the introduction of chemistry into medicine. Its fanciful theories were aided by the dreams of the early alchemists. Paracelsus was the first to proclaim a hope of immortality to mankind by the use of his chemicals, few in number, though said to be all-powerful; but Paracelsus died young and gave the lie to his boastful assertions, though his deluded votaries still continued to teach his methods.

Chemistry alone, however, did not keep this searching after short cuts alive. The charm of healing in certain diseases

*Abstract of Annual Essay before the North Carolina Medical Society, May, 1895.

has been claimed as a royal prerogative, and the mere touch of the sovereign's hand has been held sufficient to cure diseases of the most loathsome kind.

The influence of the royal touch began in England with Edward the Confessor. It was one of the artifices which this pious Prince used to excite respect, and his successors, however little they may have believed in it, did not lay aside the imposition. A form of prayer was even composed to be said during the ceremony and was employed as late as the time of Charles I. His son and successor did not believe in the practice, and is said to have had his hand roughly handled at various times. And it is said that he even made cures, giving sight to the blind and smoothing the fungus of a republican nose. His niece, Queen Anne, of pious memory, was the last to dispense the gift, and one of the last recipients was the learned Dr. Johnson, who really ought to have known better.

Empiricism received its first check at the hands of King Henry the Eighth, who acquiesced in the foundation of the College of Physicians, which examined into, and passed upon, the qualifications of all those who desired to practice medicine. The idea of its establishment first originated with the celebrated Linacre, who communicated it to the great Cardinal Wolsey. Henry was anxious to reform medicine in order to take its practice from the priests, into whose hands it had almost entirely fallen.

The chief hot-bed of empiricism at that period was Germany, which, being the fertile school of alchemy, naturally fostered errors and ran to elixirs and wonderful potions.

Perhaps the most noted empiric of this period was one Antony. He was an Englishman, educated at Hamburgh, who, on his return to England, announced the discovery of a most wonderful panacea extracted from gold. He published a treatise in support of his theory. It required a treatise to advertise a nostrum in those days, the *Caucasian* not having been founded. Paracelsus first showed that the metals possessed powers as medicines and the alchemists continued wedded to his opinions. They held that since gold was the first or King of metals, it ought to possess unlimited powers in the treatment of disease, could a proper solution of it be made.

Antony's potable gold brought him nto persecution, but gained a comfortable living for his son. The zeal of quackery found wonderful hopes for good in other bodies too. The air was supposed to contain a vital principle which the empirics strove in vain to concentrate and exhibit. It was abandoned and another object, "An original matter," which contained the principle of immortality and was supposed to reside in gold, was chased till, like the *ignis fatuus*, it disappeared in the darkness and left its silly followers to struggle out of the slough into which it had led them as best they might.

Another fallacy of the time, called judicial astrology, held that the celestial bodies influence the human frame. As far as humans go, this idea long since disappeared, but it is now, even, believed by numbers of people in this State that meat butchered in certain phases of the moon will lose largely in weight and that a wounded animal will bleed more profusely during the moon's increase than during its wane. Such was the progress of empiricism till the beginning of the eighteenth century, when it became divided between pseudo-science and open trade. Under the first of these come the early electricians and also galvanism; under the second, the selling of nostrums from the stage and warehouse. Electricity in the hands of the empiric, Graham, promised the art of living in the world a hundred years with health and happiness and the propagation of offspring far more beautiful, both mentally and physically, than the present race of puny and probationary mortals, who crawl and fret and politely play at cutting each other's throats for nothing at all on this terraqueous globe. But Graham, like Paracelsus, died young and set no example of the truth of his precepts.

Galvanism, better known as mesmerism, gained its greatest *éclat* in the hands of Mesmer, a German. He proposed to cure all diseases by what he called animal magnetism. His house was converted, with seeming benevolence, into a hospital, where crowds of the lame, halt and blind came and went away cured. Its bubble burst in Germany, however, and Mesmer

fled to Paris, where he formed a society for diffusing the art. The pupils he bound by oath to secrecy, but their conduct was so manifestly reprehensible that the Government ordered a commission to inquire into the discovery. Dr. Benjamin Franklin and Lavoisier were members of this commission, which declared in its report that the effects were produced by the influence of the mind of the empiric over that of the subject. The powers of imagination, being aroused by contact and excited sensibility, were easily directed to the practiced stronger will, until results arose which were astonishing and oftentimes entirely unexpected. This report put a stop to it for a while, but presently it rose again in the form of Perkins' Metallic Tractors. These were two bits of metal possessed of supernatural powers. A society was formed to extend their benefits, but they are no more. They had their day of greatness attested by the clergy and nobility. The Archbishop of Canterbury actually endorsed them, but recently, when a set of them was presented as a curiosity to a medical society, they were so utterly forgotten that it was necessary to have a committee search for their history. *Sic transit gloria mundi.*

The charm is fled, they are no better than two skewers, for Haygarth's experiments fully exposed the fallacy. Finding that two thin bits of iron could no longer be sold for five guineas, Mr. Perkins quietly decamped with what he had accumulated.

The stage and patent medicine warehouse were now the favorite working places of quacks—the stage is the elder of the two. There the quack could descant upon the virtues of his preparations after bringing the audience into good humor by the tricks of a clown who preceded him. The dress of each was well suited to his part. The doctor in green and gold and the clown in a fantastic rig.

The green ointment and alterative pills always found a sale among the populace, and, as a proper set of patients was always at hand to avouch the truth of every miracle, the doctor met a courteous reception as he travelled from town to town.

But the stage did not suit the taste of every quack, nor could patients be so easily supplied with nostrums from it as in a more private situation. Thus the patent warehouse came to be opened. The quack found it the best place for the sale of his nostrum, for patients could buy it there amid the multiplicity of articles without their conducts being observed.

By far the greater number of these nostrums are taken either from the Pharmacopœia or else they are the private formulæ of physicians, which have fallen into the hands of persons absolutely ignorant as regards drugs, who either believe them good for every malady or else deliberately advertise them to be cure-alls when they know better. So great has been the popular favor for patent medicine that the regular druggist has been compelled either to sell them or lose by far the greater portion of his trade. The evil has grown until to-day fully one-half of every drug store is devoted to patent medicines.

This may be said to be the history of the evil. Its real origin has been in the hearts of wicked men since the days of Adam. Whenever anything succeeds it is sure to be imitated, and there are always to be found men who are only too glad to live by imitating and claiming knowledge which they do not possess, but which they are able to make the ignorant think they possess.

So much for its origin and history. Born of ignorance, reared, continued and propagated by the ignorant of the masses through ages, it to-day holds sway to an enormous extent throughout the entire world, but especially in America. Physiology and hygiene, which common-sense would suggest as being the proper study for children, are ignored in most schools entirely, and receive only a casual bit of attention in any. Well has it been said: "The proper study of mankind is man," but the legislators and instructors of to-day take the stand that anything else but man is his proper study.

The American people are a reading people, but there is no other thing of which the average American is so profoundly ignorant as of the structure and function of his own body. Nine people out of ten think the same tube serves to convey air to the lungs and

food and water to the stomach, while the fallacies of the torpid liver and "taking cold" are not even confined to the laity. Regularity of habits is unknown in this country, and whenever there is irregularity some ill-result must follow. When it happens what does the average man do? If it be irregularity in his shoe, he consults the cobbler; if it be irregularity among his buttons, he places himself in his wife's hands; if it be irregularity in his watch, he speeds to the jeweler; but if it be irregularity in his stomach or brain, does he consult the skilled workman? No, he takes down his bottle of patent stuff which he has seen advertised somewhere, and he proceeds to dose himself. He recognizes the delicacy and value of his watch and does not understand its delicate arrangement of wheels, levers and jewels, and he dare not interfere with their frail continuity by thrusting a rude hand into the delicate mechanism. He does not recognize the marvellous beauty and the wonderful construction of his stomach and entire system, the nervous system ruling the whole yet influenced by any; nor, above all, does he know and understand, as far as man can understand, that wonderful power of interstitial change which is the difference between living matter and dead. Yet, in his ignorance, he dares to rudely meddle with his very life.

And, strangest of all, let some one who is familiar with the delicacy of this machinery but speak to warn him of the risk he runs, and what does he answer? You are a doctor—of course you are going to say it is wrong because it hurts your business. And it takes but few such answers to check the zeal of the most earnest. The doctor goes on his way, knowing only too well that every dose of patent medicine taken is a direct increase in that doctor's bill, which the ignorant one will surely have to make when nature rebels against the irregularities, imprudence, excesses and dosings to which she has been subjected.

Almost every person uses these drugs to some extent, and statistics prove that a large proportion of opium fiends begin the habit in this way, while many of these nostrums contain alcohol and are often the exciting cause of its terrible hold. They are sold in almost every general store, in all groceries and in most drug stores. Any one is at liberty to prescribe, buy or sell them; and this is strange, for if a person wishes to practice medicine he must undergo rigid examinations and prove himself competent; if he would be a druggist, he must serve an apprenticeship and then register, but any one, however ignorant or incompetent, is at liberty to prescribe, buy and sell these drugs which are advertised to do more than any doctor dares promise, and contains ingredients which druggists are not allowed by law to sell.

The traffic in such medicines is something enormous, there being no restrictions upon the sale of them and there being such a large profit upon them. Thus a pint of cheap red wine, two ounces of sulphuric acid and enough water to make a gallon, when mixed and placed upon the market under a high-sounding name, sells for three dollars. The market is flooded with drugs guaranteed to cure all the ills the flesh is heir to, and year by year the traffic grows. Some of these drugs occasionally do good, no doubt, as they are, in most cases, either taken from the dispensatory or else are the prescriptions of some physician, but the wrong is not in the drugs themselves so much as in their indiscriminate use and ignorant application.

While the people in general have advanced so far in the last two centuries in matters pertaining to government, architecture, transportation, manufactures and all the other branches of knowledge, they have not stirred an appreciable inch in obeying the philosopher's command, "Man, know thyself"; for while the upper classes of late years are somewhat improved, the majority of the people are to-day as deeply ignorant of themselves as were their forefathers two hundred years ago. For instance, there was no more wildness in supposing potable gold to cure all ills than there is in supposing Radam's Microbe-Killer to do so; there was as much probability of the existence of an essential matter in gold as there is of the existence of a bichloride of that metal.

Mesmer's animal magnetism was no

worse than the hundreds of galvanic and electric belts advertised daily. And the Archbishop of Canterbury's endorsing the Metallic Tractors of Perkins was no worse than the advertisement, in the papers of this State, of a Justice of the Supreme Court's certificate attesting the miraculous qualities of the "Electropoise." These sad facts *prove conclusively* that the people in general know no more now of themselves than those who lived two hundred years ago did. The existence of empiricism is an evil, in the present age a great evil, the own true child of ignorance and greed; but let a scientist declare that the high-sounding theory of some new fraud is false, and he is immediately accused of personal motives. The medical profession has been abused from the beginning of quackery by all quacks, and thus ignorance and calumny are enabled to defy knowledge and truth by crying to the ignorant that the doctors abuse their products because they are opposed by them.

These people catch at any and every new idea which promises to attract attention to their wares. No theory is too fanciful to be advanced and no statement too manifestly untrue to be made by them in their advertisements. They know that the intelligent classes will not know enough of nature to tell whether their claims are possible or not. And that the ignorant people know absolutely nothing of such things. They also know that every person has some idea of his body's structure and mode of action, however wrong that idea may be. And they know that the influence of the only class who can expose them can be neutralized by the cry of self-interest, and accordingly they grow rich at the wrecking of thousands of otherwise healthy bodies.

> "Alas for the rarity
> "Of Christian charity
> "Under the sun."

The liquor traffic does no more harm to the race than this. Oh, what a field for the prohibitionists. A few of the most bare-faced fallacies of the day may be mentioned without offence.

The electropoise is said to put the skin in such condition that oxygen readily passes through it and enters into the capillary circulation. Every chemist knows that such a state of affairs would in a few moments effect spontaneous combustion and leave the body ashes. Keeley's wonderful anti-liquor salt is said to be bichloride of gold. Chemists know that as long as gold and chlorine preserve their present valencies there can no more exist a bichloride of gold than there can a bi-pig-ate of chicken or bi-horsate of man, and so on; one can find somebody silly enough to believe any theory or fancy. There is no notice taken of the traffic by the law. It seems strange to require a druggist to register and be examined before he can dispense prescriptions, and at the same time to allow any person who chooses to dispense the same drugs when they are disguised in some mixture and patented.

Another fallacy is the inhalation of oxygen. "The inhalation of oxygen," says S. Solis Cohen, in *Hare's System of Therapeutics*, "has had more or less enthusiastic advocacy since the days of Priestly." Especially have advertising quacks in America, for the basest purposes of selfish gain, exploited oxygen and its mixture with nitrous oxide under various taking names, reaping for themselves a bountiful harvest of dollars and for death a bountiful harvest of lives. Newspaper proprietors and magazine publishers are not without responsibility in this matter, for the conscienceless scamps who prey upon the misery and the credulity of their fellows, have been quick to perceive and to avail themselves of the reading habits of the American people, and their deadly falsehoods are carried, on the covers and in the most conspicuous columns of the best and the worst journals and periodicals, into the homes of the credulous rich and cultured, as into the tenements where the credulous poor and ignorant are herded.

Physicians, as guardians of the public health, owe it as a duty to the community to denounce and expose this crime against the weak and helpless and to arouse in the consciences of the accessories a just recognition on their part of the wrong, nor should we longer shirk this plain duly because of the fear of the flippant reproach of interested motives. Should we not be interested beyond

measure in the rescue of the sick from their enemies and in the purification of the profession of healing from the stain that camp followers and mercenaries bring upon it? In God's name, then, let us, being without reproach, have no fear of the taunts of the thoughtless and of the sordid, but lend our best endeavors to save the commuuity from parasites more deadly than the tubercle bacillus.

As has been already stated, nothing can be too wild or chimerical for the gullable people to believe. Barnum says: "Truly the American people love to be humbugged." Thus a nickel ring on the little finger, is said to prevent and cure rheumatism. But perhaps of all the crazes which ever existed those higher-priced preparations, the ingestion of which, it is claimed, makes labor easy and robs confinement of its horror, while insuring the safety of both mother and child, are the craziest. Yet numbers of people believe it to be true and purchase the article at an exorbitant price. And this leads to mentioning a few bare facts concerning the average woman. She is not by any means confined to the poor and unlearned classes either. Two great necessities, contingent upon mere physicial existence, confront every woman; by conformity to their laws she must win or lose, live or die. Nature insists upon self-preservation and preservation of the species. Moreover, she scorns to perpetuate a deteriorating type. How little the ordinary wife and mother, even in these boasted *fin-de-siecle* days, knows of the real significance of life and of those mighty forces which know no deviation; and how little she is prepared for the parts she must needs play, whether she will or no, in this fierce struggle for mere survival. If it takes three years of constant study and clinical experience to fit a man to wait upon a woman in confinement, and to faithfully discharge the few small duties nature has left undone at the time, how much longer ought it to take to fit that woman for the part she has to play in the preceding months and for the responsibility which she then assumes for life. Perhaps some of this Society's members know of women who can translate German, read French at sight and scan Latin hexameters and paint flowers, but who could not, for their lives, tell (when they had become mothers) how much clothing the baby needed nor if it was being properly fed. What all women need as a preparation for the highest function of their lives is thorough training in some fundamental principles of anatomy and physiology. Suppose the above-mentioned woman had been taught anatomy and physiology as persistently as she was Latin and perspective, would not her children have a better chance? And is it not the duty of every parent to give his children every possible advantage in this race for the survival of the fittest which we call life?

All women should be taught these things and trained to observe them. That training should begin at an early age, so that when menstruation begins it should be expected and understood. From fourteen to eighteen or twenty the young woman's training and education, in school and out, should be toward physical perfection. Systematic exercise in the gymnasium and out of doors should be a daily certainty, and the full process of gestation and parturition, with the development of embryo, and the growth and needs of the infant, should be unfolded in continuous instruction. Any interference in the order of development would thus be taken in its incipiency and interference with nutrition be promptly checked and righted. When women turn their attention to acquiring fitness for motherhood there will be a great decrease in the number of sick women and a marked increase of intellectual power in men. Oh, let it be soon.

Pardon this digression to come back to patent medicines. If such medication is a necessity it ought to exist, but it ought to be placed on an equal footing with other necessities, sugar, for instance. Why should not the government profit by this traffic as it does by the manufacture of sugar, or rather, why should we not pay a tariff to New England on evil things as well as on good ones? If these articles are to be thus indiscriminately employed why should not government make them subservient to its interest by taxing both those of domestic and foreign manufacture. Assuredly the lives of our citizens should be guided by their

representatives from foreign enemies and domestic treachery, whether it come in the form of a bayonet, a bolus or a pill.

So much for the medicines and apparatus, now about quack doctors. Their methods are manifold and strange. One establishes institutes, advertises to treat all diseases at so much per month and furnish medicines, and has crowds of patients. Another takes quarter, half whole-page advertisements in the newspapers, travels in a private car, heals by faith and has hundreds flock to him; he continues this for a certain length of time, then his advertising stops and he fades away—jailed for fraud. Hundreds of others advertise themselves as specialists in some form and try to see how much they can abuse honorable practitioners. They travel when they have played out. One of their favorite so-called specialists is catarrh, which they make out to be dreaded constitutional disease quite beyond the power of the average practitioner. Their spelling however, is generally poor outside the advertisement. Another specialty much harped on is, as the advertisements read, all irregularities of the genital system. Their advertisements frighten ignorant people into going to them or trying their specifics. They are old specialists always, have been in practice for years, guarantee a cure and consultation free.

North Carolina is not much infected with this particular species, thanks to the wise law which requires the physicians to prove themselves competent before they can practice.

He is seen here, though, in two forms —one of these is the "Scientific Optician," who calls himself Professor in his advertisements, but Doctor everywhere else; who advertises to fit glasses to all eyes, and says on his card, "consultation free." He uses simple methods, can fit glasses to old people fairly well when they have only presbyopia, but will injure the eyes of any young person for whom he prescribes and fits glasses, for the reason that he has no right to use mydriatics, and hence dares not. During the past year one of these has been going from town to town advertising himself as a doctor and an eye specialist, and publishing in the papers certificates as to his ability and being what he claimed to be, from some of this Society's most prominent members. It is needless, of course, to say that these gentlemen never gave any such certificates.

The other form is the physician who, after failing to get or keep a practice in the usual way, begins to advertise in the newspapers and get himself puffed. Sometimes he opens a sanitarium for the treatment of something special, sometimes he goes from town to town advertising himself as a specialist. In either case well-informed people scrupulously avoid him and his methods.

There arise year by year sects and schools of all sorts of empiricism. Christian science is one of those which, after a few years of existence, has just built a temple in Boston, the home of isms, at a cost of $200,000. They hold that man is incapable of sin, suffering and death, and that all material things may be overcome by simply exerting the will. Thus one gravely says that she awoke one morning with an abscess in the throat, which disappeared in the course of the day without opening. The chief of the sect claims to have set and kept set several broken bones by faith, although she admits that it required great faith, more than the average subject possesses.

"When Bishop Berkley said there was no matter,
And proved it, 'twas no matter what he said;
They say his system 'tis in vain to batter—
Too subtle for the airiest human head,
And yet who can believe it—I would shatter
Gladly all matters down to stone or lead,
Or adamant, to find the world a spirit,
And wear my head denying that I wear it."

The *Peterbourgskia Viodomosti*, a Russian paper, says: "St. Petersburg is the most depravedly drunken city in Europe." If a knowledge of one's sins is half way to amendment, the city's morals should soon be improving.—*New York Wine and Spirit Gazette.*

"If a man gets his knee broken, where should he go?" "To Africa, where the ne-groes." "If a woman breaks her knee, where should she go?" "To Jerusalem, where the she-neys grow." —*Memphis Social Graphic.*

CURRENT LITERATURE CONDENSED.

Observations on General Paresis.[1]

The prodromal symptoms of this disease are of vast importance, as, if anything is to be accomplished by treatment it is in the early stages of the disease. Headaches and attacks of vomiting often precede the disease, and when head pains of a variable kind occur in men usually strong, unless of strongly neurotic families, the diagnosis must be guarded. In such men a cessation of business and family cares will often defer the onset of paresis. Word blindness or word deafness, or over-acute hearing; clipping of words or letters, slurring them over indistinctly; difficulty of pronunciation; tremor of the tongue and facial muscles, especially about the mouth; overaction and twitching of the occipito frontalis—these are all suspicious actions. Dr. Gray suggests that extending the arm and leg and then letting them rest on your hand will readily reveal a tremor not previously observed. The wrist and knee reflexes are exaggerated—rarely lessened.

The pupillary alterations are frequent and varied—some are irregular in contour, some dilated. They are rarely contracted. Often one is larger than the other, and there is often sluggish reaction to light and none to accommodation. Ataxic gait develops, and ataxia of the upper extremities. I have repeatedly seen incoördination shown by having the patient close the eyes, extend and swing his arm, and then suddenly try to touch the tip of his nose. We sooner or later observe great irritability, forgetfulness, marked extravagance, suspicion, and irregularities in business. Next develops the second or maniacal stage, in which there are stupor and grandiosa delusions, the patient imagining himself rich and powerful; but being too dull to reason his point, differing from paranoiac mania, where the delusions are sustained by argument. In the third stage the patient is foolish or silly, and shows the lack of mental process. Reported cases, particularly those with a specific history, average about two years. Some cases live from four to six years after the earliest noticed symptoms. In some of my cases but slight mental change was noticed until after convulsions began; in fact, in one case they seemed to be the onset, and there was no recurrence until a few hours before death, which took place nearly a year after the first attack. With this man the symptoms were largely physical; there was mental enfeeblement, but no delusions. I have found several cases reported where syphilis was followed by paresis in both husband and wife. I have had under observation for some time two women who suffered from Jacksonian epilepsy, both having had syphilis. The spasms yielded entirely to specific treatment; their husbands had both had syphilis, and have recently died of general paralysis.

An imperfect brain, either hereditary or from congenital causes, it appears to me must be the first condition in resultant degeneration in a large number of paretics. Some asylum statistics, I am aware, go to prove Morel's early statement that heredity or a strong neuropathic constitution does not enter largely into the etiology of paresis. During the first three months of illness in one case which I observed, the pulse beat fell at intervals to thirty per minute, and so continued for two or three hours. Severe epistaxis was also frequent in this case, though not associated with the heart-failure, frequently occurring on different days. It was probably due to some derangement of the cranial branches which help form the cardiac plexus, as there was no valvular disease, as there frequently is when syphilis is present, as it was in this case. In another case the arms, head, and tongue presented the jerky incoördination of disseminated sclerosis, but there has not yet been an opportunity to demonstrate the two lesions.

[1] F. W. Stevenson, M. D., *North Carolina Medical Journal*, January 20, 1896.

Chorea—Treatment of by Salicylate of Soda.[2]

In text-books the opinion seems to be that arsenic is the only medicine that has

[2] W. F. McNutt, M.D., *Pacific Medical Journal*, January, 1896.

a curative effect. I was called to see a boy who had just moved into town and had been ineffectually treated for some time for chorea. He had been unable to sleep very much for several nights, and his parents feared that he was losing his reason. The patient was a bright boy, seven years old; never had been very strong, and had been encouraged to overwork at school. Until a few days before, the patient had been able to walk, though irregularly, but could now neither feed himself nor leave his bed. The parents were both strong, with a rheumatic history, and the fifteen-year-old brother of the patient was recovering from an attack of inflammatory rheumatism. The child was placed at as complete rest as possible, given a light diet, and treated with sponge baths and a mixture of bromide of potassium and chloral with pellets of arsenic. [Dose not stated.]

The child, showing no improvement after six days' treatment, was given two and one-half grains of salicylate of sodium every hour for six hours, then about four grains every two hours thereafter. There was marked improvement in forty-eight hours, and in a week the child could sit up in bed.

The only reference that I have seen to the use of salicylates in chorea is in "Sachs' Nervous Diseases of Children," where it is mentioned that Weir Mitchell has advised their administration.

Acute Pancreatitis with Fat Necrosis.[3]

On the morning of September 2, 1895, my mother, previously in good health, except that she had been troubled for a week or ten days by what seemed a slight attack of intestinal indigestion, began to feel somewhat chilly. At noon she ate a light lunch; half an hour afterward she had what she thought a violent stomach cramp. Years ago similar attacks had been relieved by vomiting, and to obtain relief she now provoked emesis by drinking a glass of warm water. Relief did not follow, but spasmodic retching and vomiting of brownish granular-looking liquid containing bile recurred at frequent intervals, thereby increasing the pain. The patient had shown susceptibility to morphine, but seven-eighths of a grain only gave partial relief. A consultation was held, and a diagnosis of (probable) gall-stone impaction made, though no tumor could be outlined. In spite of free stimulation, the patient sank and died on the third day. At the autopsy the pancreas showed inflammation with slight hemorrhage, with spots of fat necrosis in the omentum and mesentery.

Microscopic examination of sections of the pancreas showed many areas of dense connective tissue, and in the head of the pancreas an area of fibroid tissue and round-cell inflammation. There was no specific nor alcoholic history, but there had been an attack of puerperal fever and metastatic abscess some years before.

[3] William Carver Williams, M.D., *Chicago Medical Recorder*. January, 1896.

A Female Army-Surgeon.

The *Progrès Médical* revives the story of a woman doctor, in disguise, in the British Army, some forty years back. Scores of people in India remember the brilliant Surgeon Macleod, who was kind, grave, and well up to his work, but very reserved. This reserve so annoyed a brother officer that he twitted the doctor with living like a woman and got a slap upon the face in response. A duel ensued, in which Surgeon Macleod killed his opponent, and, almost immediately resigning his post, left for England, where after several years he died; and it was only then discovered that Surgeon Macleod was a woman and a direct descendant of one of the oldest families of Great Britain. —*Indian Medical Record.*

Aluminum is not proving to be of such value for surgical instruments as was expected. It does not oxidize readily, but is deficient in elasticity, and stays bent after pressure. It is also so light that the surgeon does not feel as if he had hold of anything when grasping an instrument made of it.—*Popular Science News.*

A doctor has discovered the curious fact that the skull of a man who has died from delirium tremens contains alcoholic vapor. A small opening in the skull soon after death permits it to escape, when it can be ignited, and burns with a bluish flame.—*Popular Science News.*

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EDITORIAL.

DR. A. CONAN DOYLE'S STARK-MUNRO LETTERS—A REVIEW.

A newspaper man once was laughing at the ridiculous mistakes of the writers of fiction, who have essayed to describe the editor and the reporter, and to depict their professional life. "Why doesn't some one of your own fraternity write a story of newspaper work that will be true to nature?" he was asked, and his curt reply was: "Dog doesn't eat dog." Something of the same sentiment seems to have deterred even those physicians who can write as well as act, for literature is strikingly lacking in accurate descriptions of the doctor's inner life. The lay figure of the doctor is shoved into the background of almost every novel, and a few stories center about the doctor as hero or heroine. So long as the doctor of fiction remains in the obscurity of a minor part, the flaws of his make-up are not conspicuous, but when he is posed as a hero—and especially when *she* is posed as a heroine—the defects are glaring.

The Stark-Munro letters are the autobiography of a young English physician, containing enough references to student days and introducing us to a sufficient number of patients and medical colleagues, to afford a fair idea of the British medical profession and its methods. Although the author endeavors most laboriously to conform to the conception of a series of *bona fide* letters, the reader

is simply conscious of a story interrupted by "Dear Berties," "Your last letter," etc. The characters themselves are, for the most part, overdrawn, yet the impression is irresistible that their actions are natural, and the circumstances into which they are thrown accurately depicted.

An American physician is impressed throughout the book, with a feeling of astonishment that men of the same profession, practically agreed as to methods of medical and surgical practice and speaking the same language as himself, are so utterly dissimilar in habits, modes of expression, mannerisms, social status and aspirations.

The English physician is represented as even more helpless at the beginning of his career and more limited in his hopes of financial success than his American confrere. Thus, Stark-Monro's father, though a physician of long experience and excellent standing in every way, is unable to give his son the least help in becoming established, or even to provide suitably for his small family in the event of his death, which is imminent on account of heart disease. In this country, one of the surest means of succeeding is to "begin to practice medicine when your father is a young man." The practice of Dr. Stark-Monro, Sr., is spoken of as definitely limited, whereas, in America, an enterprising young man, backed by his father's practice, could extend the work so as to gain a livelihood for both, however small the village, unless we assume a vicinity actually shut off from the rest of the world by mountains, lakes or other insuperable physical obstacles.

After several months spent in the vain attempt to obtain a salaried hospital position, or an appointment as ship surgeon, the young doctor had the opportunity to take care of a private insane patient at fifty dollars a month. The employment, the wages, the inevitable clashing with members of the family, the dismissal after a few weeks, are almost the only series of incidents in the whole story which we can imagine duplicated in this country.

After this unpleasant experience, our hero finds a position as assistant to a busy physician in a colliery town. He describes the patients thronging to the office in the morning, the two doctors working at the same time in different rooms, with an ignorant Irish student putting up medicines as they are prescribed. Such a scene could scarcely be found on this side of the Atlantic, except in a public dispensary and, even there, the patients would be called one or two at a time into a private office, whereas Stark-Munro speaks of his work as being in the crowded waiting room, only his partner seeing the more influential patients in private. This practice, which keeps two men busy not only all day but for part of nearly every night, with the assistance of a drug clerk, two or three grooms, besides the ordinary house servants, and four horses, in short, a practice as large as that of eight or ten average American physicians in active service, yields merely a nominal income.

From this experience, Dr. Stark-Munro is summoned by a former class-mate who wishes him as an assistant. The class-mate, a rough, loud-talking, visionary jack-of-all-trades, after a colossal failure in his old home, has succeeded in building up a practice of five or six hundred patients a week, within a year after his settlement in a new town. Dr. Munro acknowledges his colleague's methods to be quackish, yet they include nothing more tangible than vulgar ostentation in the manner of living and the affection of boorish indifference to his patients who, accordingly, flock to the man who pretends that he does not wish to be bothered with them. In this country,

an itinerant tooth-puller, with the attraction of a free show and the literal use of printers' ink could draw such a crowd for a few days, but to hold so large a medical practice week after week and month after month by means of mere eccentricity—combined, it is true, with some ability—would be an utter impossibility. In fact, we need not be so credulous as to consider the picture, even in its English setting, as true to nature.

Throughout these letters, the American physician is impressed with three peculiarities of English practice: the small fees, the relative preponderance of office over visiting work, and the impunity with which a man of good principles and aspiring to take rank in the regular medical profession, seeks partnerships and salaried positions under circumstances which would result in at least temporary ostracism, by the American profession. The fact that these matters are not emphasized by the author, but that they are alluded to in the most incidental manner, is the best possible evidence that they are accurately set forth.

In this country, there is a pretty regular graduation of fees down to a charge of half a dollar for an office call, for the poorest patients by the humblest physician; thence there is one jump to pauperism. In England, on the other hand, the ordinary full charge for a poor patient, including medicine, is thirty-seven cents, and reductions are made even from this fee, until we reach the minimum of the medical clubs, each member of which pays a penny a week, sick or well, and is entitled to free attendance and medicines whenever necessary. It is a question whether the damage to professional pride is not atoned for by the saving of the patient's self-respect.

The most interesting part of the book is that in which Dr. Stark-Munro describes his striking out for himself, after a ruction with his eccentric partner. He seeks an unfamiliar town, on the principle that a physician cannot succeed among his acquaintances—there is some truth and much untruth in this prejudice. We read in detail of the economies, the trials and the actual privations of a man almost literally penniless, attempting to establish himself in medical practice. In many respects Dr. Doyle's hero acts diametrically opposite to what we should consider the natural and wise course, yet we must infer that the difference is local rather than personal. Whereas a young American physician would have rented an office lighted, heated and partly furnished, for $18 or $20 a month—it must be remembered that we are comparing a rather small town of England with a similar one of this country—the Englishman rents a whole house, unfurnished, for $250 a year. And, instead of paying a definite sum, say $3 or $4 a week, for board, he buys his own provisions, dispenses with such luxuries as butter and fruit, and does his own cooking over a gas jet. Again, few American physicians, unless practicing in the country, carry a supply of drugs worth more than a few dollars, but Stark-Munro orders, at the very start, $60 worth of medicines at a time when he was in want of the very necessities of life. On the whole, it seems that the poor American physician, gloomy as his outlook is, can enter practice with less outlay of money and with greater comfort to himself. The happy denouement of the story is an income of $1,200 and a marriage with the sister of a patient who died under Dr. Stark-Munro's care.

If this review seems to devote too much attention to financial detail, it is urged in extenuation that the letters themselves teem with just such figures. In fact, the interest of the book, to a physician, is not the agnostic argument

with which most of the letters commence, nor the very vague references to medical science, nor the descriptions of scenery and persons, but the light that the author throws on the purely business side of medical practice in England.

A. L. B.

ABSTRACTS.

THE BUILDING OF A MIND.*

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Often, while traveling by railroad, or riding, or driving through the country, I have noticed the picturesque tramp extended at full length, in sweet slumber, upon a green bank in the shade beside some stream, or crouching close to a small fire of sticks and gnawing a bone. And the thought has repeatedly passed through my mind as to whether it was a providential blessing, or the reverse, that this same squalid, illiterate chap had not the slightest possible notion what he could make out of himself, and how great and powerful he might be, if he simply started out at any given time and exerted continuously every power of mind and body until he had reached the highest possible goal of his endeavor.

Henry Drummond, in that most fascinating of all his books, "Tropical Africa," was led into very much the same vein of speculation at the sight of the scanty possessions and still scantier garb of one of the ebony children of the Dark Continent. He made up his mind on the spot that no one could ever know how much a man might possess and how great he might become, until one had actually seen with his own eyes how little a man could have and how utterly insignificant and knowledgeless he might be, and still be a man.

Napoleon beside an idiot—not even such an infinity of extremes can typify the untold potentialities of conscious mechanical improvement in the mind and body of man.

The only proof, of course, of the possibility of constructing a Napoleon out of an idiot would be the actual performance of the feat. In lieu of its accomplishment, my present purpose is simply to set down a number of facts in general, which, taken together, go far to show that such an accomplishment is only a question of time, provided other conditions are favorable.

The public is well acquainted with the fact that the food which he eats, and the stock from which he springs, and the environment by which he is surrounded, are of tremendous importance, as formative agents, in moulding the mind and body of the child. And in the brief space at my disposal I can only refer to these facts, without sparing the time for extended details.

What I think is indicated by the facts which I will proceed to relate, is that man has an extraordinary power over brain and body tissues—those of his own brain and body, or those of the child whom he may be conscientiously endeavoring to develop to the utmost possibilities of its nature. The assumption of these possibilities is, of course, utterly opposed to that belief which one hears so commonly expressed and which is best described by the name of "Kismet."

According to this theory our lives are all predestined. It matters not whether we start out and work or whether we go to bed and sleep. In either case we will become just what it was intended we should be—the millionaire's son a pauper—the beggar's child a millionaire—the outcast the greatest statesman of the age—the son of the wise man a "ne'er do 'ell."

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The deaf child can be taught to hear by watching the lips of those who are speaking, and the dumb child can learn to speak with the voice, *articulately.*

It is a very common popular error to speak of the deaf as "deaf and dumb." The only affliction, in the vast majority of such cases, is that of deafness. The child is dumb because it has never heard any sound. Children learn to use their voices entirely as an imitative process in their very tenderest years. They hear a constant hum of words around them, and with vocal chords all ready to be used they imitate, first the simpler and then the more intricate complications of vowel and consonant sounds.

But the deaf child is barred from all this world of sound, and grows up without using its vocal chords. And just as my muscles become flabby and strengthless if I never use them, so the vocal chords of the deaf child (which are mainly muscular fibre), first grow flabby and then hang down like an overstretched rope.

What is done at an oral school for the education of the deaf is to gradually but efficiently tone up these undeveloped vocal chords. It stands to reason, of course, that the younger the pupil is the easier and shorter will be the process of his training—I mean the training of these disused organs of speech. If the deaf person comes to this special school late in life, it will be a much more serious and sometimes impossible matter to restore that lost function, voice. Their disuse has become a habit with his vocal chords.

But when it is a very young child that is received in such an institution, the very gifted lady who has charge of the primary class develops the voice in this way:

First, she gains the child's affection and makes it love her. Then she has the child place one hand on her lips and another on her throat, and she makes the "A" sound—over and over again. And the child patiently imitates her until it has succeeded in nearly, if not altogether, acquiring the same power. She then gives the child some little present as a reward for work done so well, and lets it run off and play. In subsequent lessons the other vowel sounds are taught. and then the consonant sounds, and then simple words. The result of this is that at the end of eight months this child who heard nothing and had no articular voice, not only speaks in simple words itself, but has all the while been learning to hear her speak by watching the movements of her lips. It has not only secured an ear in the shape of its eye, but at the same time those toneless and sagging vocal chords have been imperceptibly developed, day by day, until they are once more the ever-ready ministers of speech, armed *cap-a-pie.*

At Elwyn, near Media, Pennsylvania, some fifteen miles south of Philadelphia, there is an institution known as the Pennsylvania Institute for Feeble-Minded Children, which is educating nearly one thousand mentally-deficient folk within its walls, besides affording a home to almost as many more "castaways of the mind."

Through its gates is constantly tramping inwards an army of staring, soulless eyes, of flat or conical heads, of watery, open mouths—clumsy, listless, stupid soldiers. After a longer or shorter series of years, this same array marches forth again into the world, little inferior and, perchance, equal to its average citizens.

The idiotic child at its admission is often much lower than the dog in the scale of being. Lower because it utterly lacks the moral sense possessed by that affectionate animal. With this perversion, or absence, of moral sense is a greater or less deficiency of all the senses. And this child that has no control over the involuntary muscles; that notices no light unless it be one of great intensity and brilliancy; that can stare the sun full in the face without winking; that prefers salt to sugar, the smell of asafœtida to the odor of the rose; that enjoys having its teeth pulled out, and is rapturous with the delight of being pricked with pins; that runs its finger roughly along the sharp blade of a razor and marvels, with curious eyes, at the sudden red flow from its severed flesh: this child is put through the same physico-mental exercise as that by which Sandow's muscles are developed. (Sandow stimulates cell-growth in his biceps by the constant use of dumb-

bells of gradually increasing weight.) Harder and harder blows of each particular sense are sent through the special afferent nerves until the gray-matter cells of the child's brain, whose function it is to reconvert the energy of sense into the energy of thought, and that again into the energy of motion, are stimulated first into action and then into growth.

The vocal chords of the congenitally deaf child sag like the over-taxed strings of a steel cross-bow. But as the child is patiently and perseveringly taught to make the "a, e, i, o and u" sounds, and then the consonant sounds, and then word sounds, the sagged chords tighten up and grow tense and taut.

The brain of the normal man is like the thousand-volt dynamo with endless layers and windings of delicate wire. The brain of the idiot resembles the ten-volt dynamo—coarse coils of wire and fewer of them. The difference between the wise and the foolish is, therefore, only one of comparative complexity of brain structure.

Repeated blows of light sent through the afferent nerves of sight to the centre of sight in the brain stimulates more and more its undeveloped toneless cells; causes the blood to surge to them and through them, and finally rethrone the disthroned sense and thought of sight. Blows of sugar taste (not salt taste) sent repeatedly through the afferent nerves of taste, produce the same regenerative changes in the taste-centre cells. The same process is pursued with the senses of hearing, of touch and of smell.

When all of these sense-centres have been not only stimulated but developed, two other wanderers—mentality and moral sense—come home again and occupy the long-vacant house.

This process of mental development requires in many cases an endless series of years for its perfection. In some instances little short of a small eternity would be necessary. The lower the type of idiot, the longer the period of years and the greater the amount of devoted long-suffering and patience required on the part of the teacher. Progress is slow at first and rapid toward the end. The only impossible factor in the treatment of the most aggravated cases of idiocy is the comparatively limited tenure of the average human life.

The bodies of many of the Elwyn children upon admission are of sadly low animal type as appearance goes, and, strange as it may seem, these vile bodies improve *pari passu* with the mental development, (the cell stimulation and regeneration). The hanging chin rises, closing the lips; the soulless eyes sparkle with regained intellection; the drooping, listless walk disappears; the brutish face softens and is humanized; the flat or conical head shows a gradual and steady metamorphosis of shape.

A gentleman connected with one of the largest institutions for the education of the deaf in this country, has recently corroborated, over his own signature, the report of an interview in which the statement was made, *that he could cure dumbness by hypnotism.*

As the hypnotic influence is known to be carried to the motor-centres in the brain through the "end organs" of hearing, and as this apparatus in most of his pupils is congenitally defective, I do not understand what medium he employs to establish the power of his own will in the gray-tissue-motor-centres.

This slight (?) difficulty obviated, however, there is no earthly reason why his will, working through these motor-centres on the toneless vocal cords of the congenitally deaf child, should not first stimulate them into action and then into genuine and constant growth. The orally educated child learns this vocal development by methods which I have already described, but which necessitates the employment of its own volition. If some means has been found by which a stronger volition than its own may beat upon its brain-centres, the education of such a child is by this very power of interference immeasurably simplified.

The thin, tightly-drawn lips of the ascete are brought into this condition of tenseness and constant contraction by his own will power. Duty and high thoughts banish all ideas of sensuality and pleasure from his mind, and his lips are but a reflex of the sternness of his purpose and the straightness and narrowness of his path.

The truth of the Biblical query as to who can add a cubit to his stature by

the thought of it is open to serious question. There seems to be no good reason why a man, by constantly stretching his body and by having his thought all the time fixed on that purpose, may not in reality cause the very condition of affairs that he desires to come to pass.

There is unquestionably authenticity in medical literature for the fact that heart disease is frequently and actually produced by a state of mind which not only dreads but anticipates such an occurrence. And the saying is well known that ninety-nine people out of a hundred who die of the plague never have it.

There is truth in phrenology and physiognomy. This truth may be twofold—not only may certain conditions of head and face indicate the possession of certain mental qualities, but it is certain that the will itself, by repeated blows of itself on certain parts of the body, can and does by the very act cause blood to tend to those parts and so produce an entirely unexpected and phenomenal development there.

PERISCOPE.

MEDICINE.

The Auscultatory Signs of Mitral Stenosis.

Graham Steell (*Med. Chron.*, September, 1895) has systematically analyzed sixty cases (forty-one female, nineteen male), of mitral stenosis from the point of view of physical investigation; seventeen died, and the *post-mortem* records are given. The results are compared with a table published by the author in 1888 as the outcome of his clinical experience. Of changes in the natural sounds of the heart, accentuation of the pulmonary second is unimportant, since it is common to all forms of cardiac disease; accentuation of the first and reduplication of the second sound in the mitral area are, however, both common signs, each occurring in about two-thirds of the cases. Absence of the second sound from the mitral area is, however, comparatively rare. With regard to murmurs the apical presystolic was only present in just over half the cases, while a diastolic could be heard in four-fifths; this latter was more frequently audible both at the apex and above than at the apex alone. In three-fourths of the cases an apical systolic murmur was present, often not conducted round to the back; in 83 per cent. there was a systolic murmur in the pulmonary area, in 68 per cent. in the tricuspid region. Steell lays special stress on the very great frequency of diastolic murmurs in mitral stenosis; no satisfactory theory of their origin has as yet been put forward. The heart in this disease is much enlarged transversely, the right auricle being, of course, increased, but the left ventricle also gaining to an extent more in accordance with clinical experience than with *a priori* reasoning. There is no pathognomonic pulse in mitral stenosis, though three stages can be roughly distinguished according to the successive conditions of tension and regularity through which it passes.—*Br. Med. Jour.*

Recurrent Mumps.

Albert (*Rev. de Méd.*, October, 1895) relates two cases, both occurring in trumpeters, each of whom had three separate relapses at intervals of some three to five months or so. Each attack was characteristic of the disease, and in one case orchitis complicated a relapse. In both cases hypertrophy of the parotid remained behind. The author excludes the possibility of the disease being any other lesion than mumps, such as suppurative parotitis, gaseous tumor of Steno's duct, or of the gland, or the special gaseous perribuccal tumor seen in musicians, etc. The occupation of trumpeter was an important, and at least a predisposing, factor in the relapse. In 1893–94, forty-five cases of mumps occurred in the regiment; of these, forty-three presented nothing unusual, and thus the two trumpeters alone formed an exception. The relapse occurred when they went back to their occupation and disappeared when they discontinued it. The only objection against the view is that the relapse did not appear at once on their resuming their usual occupation. On examining the mouth, Steno's duct was found in both cases patent but not abnormally so. Perhaps micro-organisms from the mouth penetrated along the dilated ducts into the glands, or perhaps a retention of micro-organisms was produced by the closure of the ducts during the act of insufflation. This latter view would conform better to the opinion that relapses in mumps are not due to a fresh infection but to a recrudescence. The hypertrophy still present eighteen and twenty-two months respectively after the first attack is rare after mumps. The glands were not much enlarged and were painless. The hypertrophy was no doubt due to overgrowth of connective tissue. At present the patients are not inconvenienced by the enlargement, and the parotid function appears to be normal. It is possible that a subsequent atrophy may occur. The author concludes that (1) the efforts of insufflation, such as are

made by military trumpeters, may lead to relapse in mumps; (2) young trumpeters, owing to closer application, are more prone to suffer than the older ones; and (3) the relapses may be complicated by a lasting lesion of the parotids. The glands hypertrophy and become hard, forming a kind of chronic mumps.

THERAPEUTICS.

Thyroid Treatment.

Milla (*Riv. Sper. di Fren.*, September 30th, 1895) reviews at length the results of thyroid treatment in various diseases. In myxœdema and cretinism, the gland might fairly be called a true specific, and the chief question is as to the best mode of administration. Of the different methods employed, that is best which enables one to gauge most accurately the quantity given; probably compressed tabloids or pills made up of the dried powdered gland (Melsen's method) are the best form of administration. Thyroid has been given with success in obesity, no change being made in the diet. In these cases one has to be especially on the look-out for cardiac disturbances. In mental disease, good results have also been obtained. For example, Bruce in twenty-three cases got the following results: Three of acute mania were all cured; four melancholia, two cured and one improved; two chronic mania, one (four years' duration) improved, the other (two years' duration) cured; one syphilitic and one alcoholic psychosis, neither improved; four puerperal psychosis, no cure, but notable improvement; one mental disturbance from suckling cured in five months, another, in spite of a year's treatment, not improved; three cases of climacteric insanity, two of which were improved by the treatment. In goitre, of sixty cases treated by Bruns, fourteen were cured, twenty noteworthy improvement, and nine moderate. Thyroid treatment generally improves, if it does not cure, simple hypertrophic goitre, while it invariably fails in the cystic, colloid, or fibrous varieties. In Graves's disease, thyroid appears to give few satisfactory results. In psoriasis and other chronic skin diseases, authorities differ widely as to the results of thyroid treatment. Bramwell is the most enthusiastic in its praise, but few others have had such good results. Some cases of sclerodermia have improved, but the cases are too few to found any judgment upon. Amongst other diseases for which thyroid has been given with doubtful success one may mention acromegaly, facial hemiatrophy, tuberculosis, leprosy, and even cancer. As the authority wisely says, thyroid is not a general panacea.

Antiseptics in Food.

The recent prosecution for selling orange wine containing a little over three grains to the pint of salicylic acid suggests the propriety of discussing shortly the general question of preserving foods by antiseptics. Wines are sulphured and doctored with salicylic acid, fluoborates and fluosilicates; to milk in hot weather all sorts of antiseptics are added, the chief being boracic acid, varied of late by the addition of formalin. Boracic acid or borax is also the favorite antiseptic for butters. It may indeed be stated generally that all decomposable articles not sterilized by boiling, or preserved from change by cold, are liable to be treated with small quantities of antiseptics. There may not be in any one article a percentage sufficient to cause, when given in a single dose, appreciable effect, but a person taking boraxed milk and butter for breakfast and tea, and a salicylated wine for dinner, will be consuming day by day a sufficient amount of active drugs to produce some effect on his health.

Salicylic acid is a poison. In 1878 a case happened in which so small a dose as three grammes (forty-six grains) caused death in forty hours; possibly the acid was impure. In three other cases in which decided and dangerous symptoms were produced the dose was much larger, being fifteen, twenty-two, and fifty grammes respectively. Salicylic and benzoic acids are, therapeutically, attenuated phenols. Phenol being most poisonous, then comes salicylic acid, and lastly benzoic acid. What the effect of small doses of salicylic acid, say five grains daily, may be is at present a matter of conjecture; we know that most of it is excreted by the kidneys united with glycocoll, and also that it is a substance which readily enters into combination, forming a variety of aldehydes and esters, the physiological effects of which are not precisely the same as the free acid. It is conceivable that small quantities of salicylic acid when they come in contact with the intestinal and gastric juices are in this way changed. It is also possible that long bottling of a wine with salicylic acid will change the acid into salicylic ester or salicylic aldehyde. Schmitt, for instance, has found that although Rhine wines are sulphured the old Rhine wines contain no free sulphurous acid, the greater portion having combined with aldehyde, forming aldehyde-sulphurous acid.

Be this as it may, the growing use of antiseptics constitutes a possible danger to health. Persons with sound excretory organs have for years daily taken chemicals of the kind in their food without injury, yet it can be confidently predicted that other persons with damaged or weak kidneys will be affected by minute doses. It must also be remembered that digestion in the intestines is carried on to a great extent by what, outside the intestines, would be recognized as a fermentative or putrefactive process. In short, just as the nourishment of a number of plants depends on the microbes around their rootlets, so the assimilation of our own nourishment depends to a large degree on the activity of hosts of colonies of microbes in the intestinal canal. All antiseptics, even in minute quantity, will inhibit the activity of these colonies or affect unequally various species, the net result in ordinary individuals being an impairment of digestion or an actual dyspepsia.—*British Medical Journal, Public Opinion.*